costs were also modeled using linear regression. In this model the "Grier-effect" was estimated by using a dummy variable. **RESULTS:** For all months (November 2000–July 2001) projected PMPM cost of antibiotic therapy was lower than actual PMPM cost of antibiotic therapy. The r-squared for the model was 0.96. The 9-month average for projected PMPM antibiotic costs was $2.52 and actual PMPM antibiotic costs were $3.51, for an average differential of nearly $1.00. The extrapolated cost differential over the forecasted 9-month period was $12.5 million. This translates into $16.7 million in additional annual costs for antibiotic therapy due to the "Grier-effect". Regression analysis of the effects of Grier indicated the GCD increased expenditures for antibiotics by 30% ($p < 0.0001$). According to regression modeling, a 30% increase in expenditures due to Grier increased costs of antibiotic therapy by $18.3 million. **CONCLUSIONS:** The GDC significantly increased antibiotic expenditures, resulting in an additional ~$17–18 million in annual costs. Additional research is necessary to assess whether this increase improved quality.

PIN8

PATTERNS OF ANTIBIOTIC PRESCRIBING IN TREATING COMMUNITY-ACQUIRED PNEUMONIA OUTPATIENTS

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OBJECTIVE: Community Acquired Pneumonia (CAP) is a major cause of mortality and healthcare resource use worldwide. Proper management of less severe outpatient CAP has demonstrated resource savings without adverse patient outcomes. Although treatment guidelines recommend the use of certain pharmacological agents such as macrolides, fluoroquinolines or doxycycline for outpatient CAP, limited data are available on actual usage. We aim to describe current antibiotic prescribing patterns using a large prescription database. **METHODS:** The study population comprised IMS MediPlus-UK. Adult CAP outpatients (ICD-10: J13–J15) diagnosed during January 1, 1997 through December 31, 2001 and treated with antibiotics were included. Patients were followed through the initial duration of therapy and an additional 4-week period to capture the original therapy and added antibiotic use. Those with HIV/AIDS were excluded. Antibiotics were categorized as "penicillins", "cephalosporins", "macrolides", "tetracyclines", "quinolones", and "other" (including multisubstance and trimethoprim). **RESULTS:** Among 739 episodes identified, most were initially treated by penicillin group (including amoxicillin, ampicillin, penicillin, 41%), and macrolides (erythromycin, azithromycin, clarithromyc, 28%). Cephalosporins, tetracyclines, and quinolones were used less often, 10%, 4% and 5%, respectively. The median prescribed length of therapy was 7 days, except tetracyclines (6). The means (days)(standard deviation) were: 6.9(2.8)for penicillins, 7.4(1.9)for cephalosporins, 9.5(17.2) for macrolides, 6.3(2.5) for tetracyclines, 6.4(1.5) for quinolones, and 6.7(1.5) for other. The percentage of patients received a second antibiotic during study period ranged from 15% to 23%, with the second round mostly in the same category as the initial antibiotic. **CONCLUSIONS:** Duration of therapy for CAP outpatients remains relatively long in this UK population. A substantial proportion of patients received additional therapy during the episode of care. Long therapy duration has been associated with patient nonadherence, and/or treatment failure. Effective therapy options with shorter length of therapy are needed to improve CAP outpatient management and patient outcomes.

PIN9

IMPACT OF CHANGES IN REIMBURSEMENT POLICY ON ANTIBIOTIC USE AND EXPENDITURES

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OBJECTIVE: In February 2001, the Ontario Drug Benefit (ODB) Formulary was changed so that most fluoroquinolone (FQ) antibiotics would be subject to Limited Use (LU) restrictions. Only norfloxacin remained as General Benefit (GB). This study analyzed the impact of the LU policy on ODB antibiotic volume and expenditures. **METHODS:** We analysed monthly ODB data on prescribing volumes and expenditures of 29 types of antibiotics over the period (January 1999 to November 2001). Ordinary least squares (OLS) regression with a robust estimator of the standard errors was used to estimate the effect of LU on the pre-policy trend in antibiotic use and expenditures. Estimates from these models were used to predict the cumulative impact of LU on outcomes in the 10 month post-LU policy period (February to November 2001). **RESULTS:** Of the 29 types of antibiotics included in this analysis (with total ODB prescriptions and expenditures of 2.3 million and CDN$55 million in 2000), changes for ciprofloxacin and norfloxacin were the greatest in magnitude. We observed a shift in prescriptions and expenditures from LU FQs (–167,764, $p < 0.00$; –$8,963,635, $p < 0.00$, respectively) to GB FQs (45,126, $p < 0.00$; $2,069,956, $p < 0.00$). However, while FQ prescriptions and expenditures decreased significantly (–118,020, $p < 0.00$; –$6,662,708, $p < 0.00$), we found no significant change in either total number of antibiotics prescribed or total antibiotic expenditures after LU. Also, prescriptions for trimethoprim sulfamethoxazole (TMP/SMX) increased significantly. **CONCLUSIONS:** Although no direct cause and effect can be shown with these observational data, the results suggest that the change in reimbursement policy to restrict prescribing of FQs did not significantly affect overall ODB antibiotic prescriptions and expenditures. Although use of and expenditures on restricted FQs were reduced significantly, there was an offsetting increase in